

In the Claims:

Following is a complete listing of the claims pending in the application, as amended:

1-17. (Cancelled)

18. (Currently amended) The apparatus of claim ~~47-21~~ wherein the control system executes operational safeguards to prevent mishandling of a workpiece in response to the output signal of the electronic workpiece detection system after the apparatus has experienced a power interruption.

19. (Currently amended) The apparatus of claim ~~47-21~~ wherein the electronic workpiece detection system comprises:

- an electromagnetic energy emitter for emitting electromagnetic energy in a direction for reflection by a workpiece held by the workpiece holder when a workpiece is present on the workpiece holder;
- an electromagnetic energy detector for detecting the presence of reflected electromagnetic energy indicative of the presence of a workpiece held by the workpiece holder.

20. (Previously presented) The apparatus of claim 19 wherein said electronic workpiece detection system provides an output signal indicative of the presence of a workpiece based on the angle at which reflected electromagnetic energy is received by the electromagnetic energy detector.

21. (Currently amended) ~~The apparatus of claim 17~~ An apparatus for processing a workpiece of the type used in manufacturing microelectronic components, the apparatus comprising:

- a processing container adapted to hold a processing fluid used to process the workpiece;

a workpiece holder for holding the workpiece in a processing position with respect to the processing container during processing;
an electronic workpiece detection system providing an output signal indicative of the presence and absence of a workpiece on the workpiece holder;
a control system for executing handling operations in response to the output signal received from the electronic workpiece detection system; and
wherein the processing container and workpiece holder are adapted to electroplate the workpiece.

22. (Cancelled)

23. (Currently amended) The apparatus of claim ~~22-24~~ wherein the control system executes operational safeguards to prevent mishandling of workpieces in response to the electronic workpiece detection system after the apparatus has experienced a power interruption.

24. (Currently amended) ~~The apparatus of claim 22~~ An apparatus for processing a workpiece of the type used in manufacturing microelectronic components, the apparatus comprising:

a plurality of workpiece supports and corresponding processing bases each defining a processing station;
an electronic workpiece detection system for detecting the presence and absence of a workpiece at each of the processing stations;
a control system for executing workpiece handling operations in response to the electronic workpiece detection system; and
wherein at least one of the plurality of processing stations is adapted to electroplate a workpiece.

25. (Cancelled)

26. (Currently amended) The apparatus of claim ~~25-29~~ wherein the control system executes operational safeguards to prevent mishandling of a workpiece in response to the output signal of the electronic workpiece detection system after the apparatus has experienced a power interruption.

27. (Currently amended) The apparatus of claim ~~25-29~~ wherein the electronic workpiece detection system comprises:

- an electromagnetic energy emitter for emitting electromagnetic energy in a direction for reflection by a workpiece held by the workpiece holder when a workpiece is present on the workpiece holder;
- an electromagnetic energy detector for detecting the presence of reflected electromagnetic energy indicative of the presence of a workpiece held by the workpiece holder.

28. (Previously presented) The apparatus of claim 27 wherein said electronic workpiece detection system provides an output signal indicative of the presence of a workpiece based on the angle at which reflected electromagnetic energy is received by the electromagnetic energy detector.

29. (Currently amended) ~~The apparatus of claim 27~~ An apparatus for processing a workpiece of the type used in manufacturing microelectronic components, the apparatus comprising:

- a plurality of workpiece processing stations, each processing station including
- a workpiece holder for holding a workpiece,
- a processing base adapted to receive a processing fluid used to process
the workpiece, the workpiece holder and processing base being
movable relative to one another between a first position in which a
workpiece is loaded to or removed from the processing station and
a second position in which the workpiece holder is proximate the
processing base for processing of a workpiece held thereby, and

an electronic workpiece detection system providing an output signal
indicative of the presence and absence of a workpiece on the
workpiece holder;

a control system for executing workpiece handling operations in response to the
output signals received from the electronic workpiece detection systems;
and

wherein at least one of the plurality of processing stations is adapted to
electroplate a workpiece.

30. (Previously presented) An apparatus for processing a workpiece of the
type used in manufacturing microelectronic components, the apparatus comprising:
electrolytic deposition means for depositing a metal onto a surface of the
workpiece;
workpiece detection means for detecting the presence and absence of a
workpiece at the electrolytic deposition means; and
control means for controlling handling of wafers in the apparatus in response to
the workpiece detection means.